Waterborne Coatings

Waterborne Coating Use

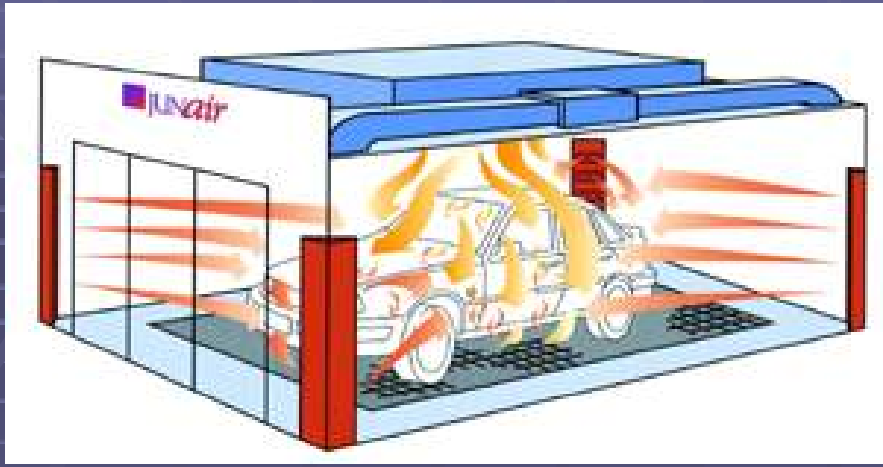
- Europe
- U.S. Original Equipment Manufacturing
- Refinishing
  - California
    - primers
    - European cars
  - Eastern U.S. – base-coats
  - Color matching for U.S. colors is not adequate now
  - Eastern U.S. – base-coats
- Regulatory driven – air quality

Advantages

- Less toxic
  - Solvent paint may contain xylene, toluene, ethyl benzene, MEK
  - Waterborne paint may contain glycol ethers, propanol
- Lower VOC
- Alternative to TBAC and PCBTF to reduce VOC formulation in coatings
- May cost less
- No additives, reducers
  - Thin with water if needed
- Less reaction with substrate
- Longer pot life
- Water-based clean-up

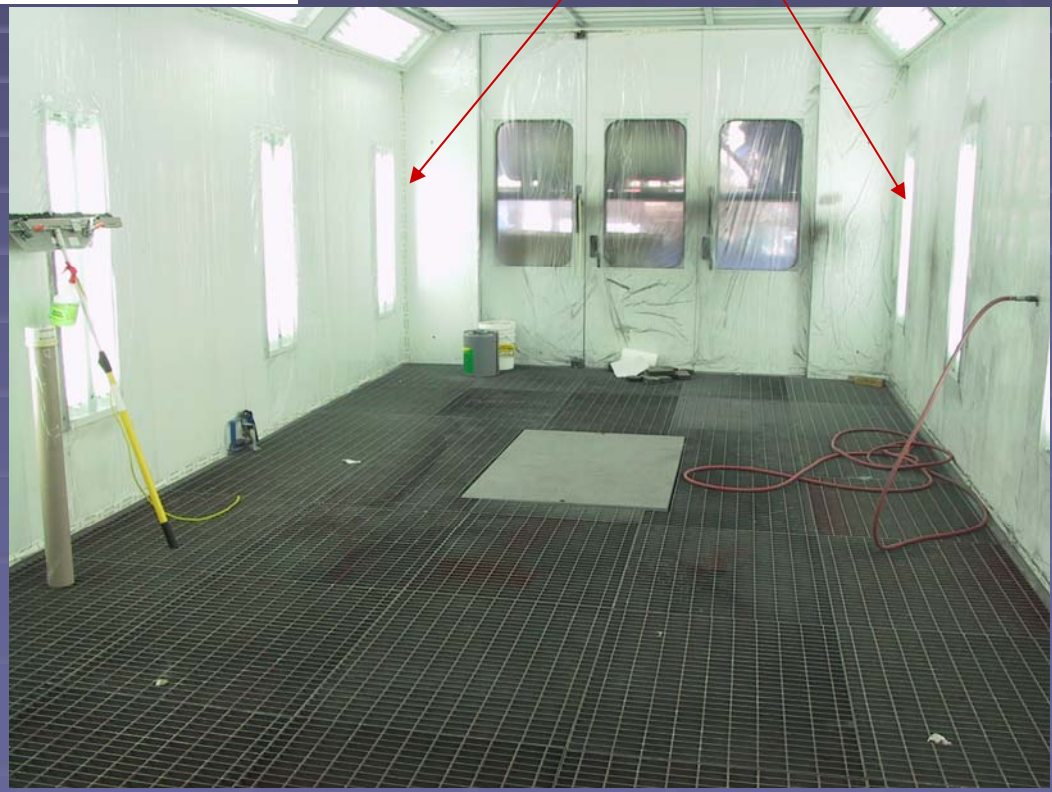
Equipment Changes

- Corrosion resistant spray guns
- Drying and curing technology
  - Spray booths with heat & turbulence
  - Requires very clean spray booth
- Infrared and uv lamps for primer
- Job scheduling
  - Plan for increased drying time



Retro-fitted air movement devices for curing and drying

Place in 4 corners of spray booth



Regulatory Impacts- Air Quality

- CARB adopted suggested control measure (SCM) to improve consistency and enforceability of regulations
  - Reduce VOC in primer and top coat by 2009
  - Primer-sealer, single stage coatings by 2010
- SCAQMD adopted December 2005
  - Effective date July 1, 2008, clear and color coats
- SJVAPCD proposed – workshops January 2006
- Rulemaking updates

  http://www.arb.ca.gov/coatings/autorefin/scm/rulemaking.htm

Waterborne Coatings

- Future for refinishing industry
- Expect coatings industry to develop more products to meet needs
- Shops will need to upgrade spray booth equipment for faster production